What's your model process map?

STAT 245

Response Type

Model Family & Link Function

Assessment Conditions

Check Using Plots:

Multiple Linear Regression

Poisson Regression

Negative Binomial Regression

Binary Regression

Lack of non-linearity

Independence of Residuals

Normality of Residuals

Constant Residual Variance

Mean-Variance Relationship as expected

Logit-Linearity (or probit- or cloglog-linearity)

Log-linearity

Residuals vs fitted values

Residual histogram

ACF plot

Scaled residual plot

Scatter plot of response (or log(response) or logit(response) etc.) vs quantitative predictor(s)

Quantitative variable

Count variable

Categorical variable (2 categories)

Categorical variable (3+ categories)

Counts of "successes" and "failures"